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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/736,647 | SHIN, AKIHIRO | |
| | Examiner | Art Unit | |
| | Jason K. Lin | 2623 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *17 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/17/2003, 11/07/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This office action is responsive to application No. 10/736,647 filed on 12/17/2003. **Claims 1-21** are pending and have been examined.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) filed on 12/17/2003 and 11/07/2005 is considered.

### *Claim Rejections - 35 USC § 112*

3. **Claims 19-21** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The disclosure (specification and drawings) fail to enable one of ordinary skill in the art how to make or use "a plurality of first channel allocating switches" as recited in claim 19 (P.6: lines 32-33), claim 20 (P.7: lines 25-26), and claim 21 (P.8: lines 21-22).

The specification at Figs.3, 5, and 12; P.3: line 26; P.8: lines 26-27; P.9: line 9, 26 discloses only a single first channel allocating switch.

However, the specification does not say anything about a plurality of first channel allocating switches.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1, 2, and 17** are rejected under 35 U.S.C. 102(e) as being anticipated by Kasal et al. (US 2003/0009542).

Consider **claim 1,** Kasal teaches television broadcast content distributing system (Fig.1) comprising:

a plurality of television broadcast content distributing servers for generating television broadcast contents (server farm 132 – Fig.1; Paragraph 0036-0037);

a plurality of television broadcast content receiving terminals for receiving said television broadcast contents (set top boxes 110 – Fig.1, television set 115 – Fig.1; Paragraph 0037);

a first channel allocating switch (core switch 124 – Fig.1), connected to said television broadcast content distributing servers, for allocating channels to said television broadcast content distributing servers (Paragraph 0032, 0035), respectively;

a plurality of second channel allocating switches (Edge switches 122 – Fig.1), each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals (Fig.1; Paragraph 0032, 0037, 0042); and

a plurality of virtual local area networks, each arranged in correspondence with one of said channels between outputs of said first channel allocating switch and inputs of said second channel allocating switches (Fig.1; Paragraph 0032).

Consider **claim 2,** Kasal teaches a television broadcast content distributing system (Fig.1) comprising:

a plurality of television broadcast content distributing servers for generating television broadcast contents (server farm 132 – Fig.1; Paragraph 0036-0037);

a default server for generating a menu of said television broadcast contents (database server within the server farm 132 – Fig.1; Paragraph 0039, 0070);

a plurality of television broadcast content receiving terminals for receiving said television broadcast contents and said menu of said television broadcast contents (set top boxes 110 – Fig.1, television set 115 – Fig.1; Paragraph 0037);

a first channel allocating switch (core switch 124 – Fig.1), connected to said television broadcast content distributing servers and said default server, for allocating channels to said television broadcast content distributing servers and said default server (Paragraph 0032, 0035), respectively;

a plurality of second channel allocating switches (Edge switches 122 – Fig.1), each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals (Fig.1; Paragraph 0032, 0037, 0042); and

a plurality of virtual local area networks , each arranged in correspondence with one of said channels between outputs of said first channel allocating switch and inputs of said second channel allocating switches (Fig.1; Paragraph 0032).

Consider **claim 17,** Kasal teaches an Internet protocol router connected to said first channel allocating switch (router 134 – Fig.1; Paragraph 0034); and

an additional virtual local area network arranged in correspondence with a channel for said Internet protocol router between an output of said first channel allocating switch and the outputs of said second channel allocating switches (Paragraph 0032, 0034).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 3 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasal et al. (US 2003/0009542) in view of Medina et al. (US 6,975,581).

Consider **claim 3**, Kasal teaches wherein each of said second channel allocating switches (Edge switches 122 – Fig.1) comprises:

a switch section (Paragraph 0031 teaches edge switches 122 – Fig.1 that switch packets and provide media streams to receiving terminals, therefore it inherently has a switch section to perform these tasks), provided between said virtual local area networks and one or more of said television broadcast content receiving terminals (Fig.1, Paragraph 0031 teaches edge switches 122 – Fig.1, in between core switch 124 – Fig.1 and receiving terminals. Paragraph 0032 teaches virtual LANs allocated in network 120, which also resides in between core switch and edge switch), but does not explicitly teach,

a control section;

a correspondence storing section, connected to said control section, for storing a correspondence table between physical addresses of said television broadcast content receiving terminals connected to said each of said second

channel allocating switches and selected ones of said virtual local area networks; and

a switch section, connected to said control section.

In an analogous art Medina teaches, a control section (Col 4: lines 48-51; Col 1: lines 29-31 teaches a switch determining how, when and through which port packets are retransmitted, therefore it is inherent it has a control section in order to perform these tasks);

a correspondence storing section (Global Address Table 12 – Fig.2, 4), connected to said control section, for storing a correspondence table between physical addresses of content receiving terminals connected to said each of channel allocating switches and selected ones of virtual local area networks (Col 1: lines 61-64 teaches each switch contains a global address table 12 – Fig.2, 4, that lists each MAC address and its associated VLAN that it belongs to); and

a switch section, connected to said control section (Col 2: lines 33-35, 41-45 teaches searching for the destination MAC address with the VLAN id in global address table 12 – Fig.2, 4, and forwarding it to the correct port if found in the address table, therefore the control section is connected to the switch section).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include a control section; a correspondence storing section, connected to said control section, for storing a correspondence table between physical addresses of content receiving terminals connected to said each of channel allocating switches and selected ones of virtual local area

networks; and a switch section, connected to said control section, as taught by Medina, for the advantage of quickly and easily identifying the destination of content and forwarding content to the intended recipient with minimal delay.

Consider **claim 11,** Kasal teaches wherein each of said second channel allocating switches (Edge switches 122 – Fig.1) comprises:

a switch section (Paragraph 0031 teaches edge switches 122 – Fig.1 that switch packets and provide media streams to receiving terminals, therefore it inherently has a switch section to perform these tasks), provided between said virtual local area networks and one or more of said television broadcast content receiving terminals (Fig.1, Paragraph 0031 teaches edge switches 122 – Fig.1, in between core switch 124 – Fig.1 and receiving terminals. Paragraph 0032 teaches virtual LANs allocated in network 120, which also resides in between core switch and edge switch);

a transceiver, connected to said default server, for communicating with said default server (database server within the server farm 132 – Fig.1; Paragraph 0039, 0070. the database server can receive and store indexing of available content and provide the menu selection for services to the user, therefore it is inherent that the default server has a transceiver and that it is connected to it in order for it to perform these tasks),

Kasal does not explicitly teach, a control section;

a correspondence storing section, connected to said control section, for storing a correspondence table between physical addresses of said television broadcast content receiving terminals connected to said each of said second channel allocating switches and selected ones of said virtual local area networks;

a switch section, connected to said control section.

In an analogous art Medina teaches, a control section (Col 4: lines 48-51; Col 1: lines 29-31 teaches a switch determining how, when and through which port packets are retransmitted, therefore it is inherent it has a control section in order to perform these tasks);

a correspondence storing section (Global Address Table 12 – Fig.2, 4), connected to said control section, for storing a correspondence table between physical addresses of content receiving terminals connected to said each of channel allocating switches and selected ones of virtual local area networks (Col 1: lines 61-64 teaches each switch contains a global address table 12 – Fig.2, 4, that lists each MAC address and its associated VLAN that it belongs to); and

a switch section, connected to said control section (Col 2: lines 33-35, 41-45 teaches searching for the destination MAC address with the VLAN id in global address table 12 – Fig.2, 4, and forwarding it to the correct port if found in the address table, therefore the control section is connected to the switch section).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include a control section; a correspondence storing section, connected to said control section, for storing a correspondence

table between physical addresses of content receiving terminals connected to said each of channel allocating switches and selected ones of virtual local area networks; and a switch section, connected to said control section, as taught by Medina, for the advantage of quickly and easily identifying the destination of content and forwarding content to the intended recipient with minimal delay.

8. **Claims 4 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasal et al. (US 2003/0009542), in view of Medina et al. (US 6,975,581), in view of Suzuki et al. (US 5,892,912), and further in view of Ekstrom (WO 98/44684).

Consider **claims 4 and 12**, Kasal and Medina teach, wherein said correspondence storing section comprises a memory (Medina - Col 4: lines 57-60, Col 5: lines 44-46 teaches address table 12 – Fig.1, 4 is implemented as a hash table that is typically implemented in DRAM),

television broadcast content receiving terminals (110, 115 – Fig.1) and allocating one of said virtual local area networks by referring to said correspondence storing section using a physical address of said one of said television broadcast content receiving terminals (Kasal – Paragraph 0032; set top boxes 110 – Fig.1, television set 115 – Fig.1; Paragraph 0037; Medina - Col 2: lines 33-35, 41-45 teaches searching for the destination MAC address with the VLAN id in global address table 12 – Fig.2, 4, and forwarding it to the correct port if found in the address table containing the physical address of the content receiving device),

Kasal and Medina do not explicitly teach the memory is non-volatile memory;

said control section receiving a power-on signal from one of said television broadcast content receiving terminals.

In an analogous art Suzuki teaches, the memory is non-volatile memory (Col 6: line 67 – Col 7: lines 9 teaches MAC addresses of all nodes associated with VLANs are stored in nonvolatile memory);

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Medina to include non-volatile memory, as taught by Suzuki, for the advantage of storing data permanently so data will not be lost when power is or cannot be supplied.

Kasal, Medina, and Suziki do not explicitly teach said control section receiving a power-on signal from one of said television broadcast content receiving terminals.

In analogous art, Ekstrom teaches a control section receiving a power-on signal from one of content receiving terminals (Abstract; P.8: lines 26-31, P.9: lines 1-13).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Medina to include a control section receiving a power-on signal from one of content receiving terminals, as taught by Ekstrom, for the advantage of automatically notifying the switch of an active

device, in order for it to immediately register the user device into the network for use.

9. **Claims 5, 6, 13, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasal et al. (US 2003/0009542) in view of Medina et al. (US 6,975,581), and further in view of Ekstrom (WO 98/44684).

Consider **claim 5**, Kasal and Medina teach, wherein said correspondence storing section comprises a volatile memory (Col 4: lines 57-60, Col 5: lines 44-46 teaches address table 12 – Fig.1, 4 is implemented as a hash table that is typically implemented in DRAM {volatile memory}),

television broadcast content receiving terminals (110, 115 – Fig.1) and allocating one of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server (Kasal – Paragraph 0032, 0039, 0070), but do not explicitly teach said control section receiving a power-on signal from one of said television broadcast content receiving terminals.

In analogous art, Ekstrom teaches a control section receiving a power-on signal from one of content receiving terminals (Abstract; P.8: lines 26-31, P.9: lines 1-13).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Medina to include a control section receiving a power-on signal from one of content receiving terminals, as taught by

Ekstrom, for the advantage of automatically notifying the switch of an active device, in order for it to immediately register the user device into the network for use.

Consider **claim 13,** Kasal and Medina teach, wherein said correspondence storing section comprises a volatile memory (Col 4: lines 57-60, Col 5: lines 44-46 teaches address table 12 – Fig.1, 4 is implemented as a hash table that is typically implemented in DRAM {volatile memory}),

television broadcast content receiving terminals (110, 115 – Fig.1) and reading one of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server (Kasal – Paragraph 0032, 0039, 0070), determining whether said read one of said virtual local area networks is chargeable (Paragraph 0038; Paragraph 0032) or free, carrying out an authentication when said read one of said virtual local area networks is chargeable (Paragraph 0050 teaches content that may be requested, accessed, and paid for by the viewer. Paragraph 0057 teaches virtual LANs that allow only authorized devices to receive media streams. *Therefore, authentication is performed in order for the selected content to be transmitted and received by the viewer*), and allocating said read one of said virtual local area networks when said read one of said virtual local area networks is free or when said authentication is permitted (Paragraph 0032 and 0057 teaches virtual LANs that allow only authorized devices to receive media streams), but do not

explicitly teach said control section receiving a power-on signal from one of said television broadcast content receiving terminals.

In analogous art, Ekstrom teaches a control section receiving a power-on signal from one of content receiving terminals (Abstract; P.8: lines 26-31, P.9: lines 1-13).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Medina to include a control section receiving a power-on signal from one of content receiving terminals, as taught by Ekstrom, for the advantage of automatically notifying the switch of an active device, in order for it to immediately register the user device into the network for use.

Consider **claims 6 and 14**, Kasal, Medina and Ekstrom teach, wherein said control section registers said allocated one of said virtual local area networks in said correspondence storing section by referring to the physical address of said one of said television broadcast content receiving terminals (Kasal - 110, 115 – Fig.1, and Paragraph 0031 teaches television broadcast receiving terminals. Medina - Col 4: lines 48-51; Col 1: lines 39-44 teaches communication between nodes in the same VLAN. Col 1: lines 61-64 teaches VLANs registered to a particular MAC address of a user device).

10. **Claims 7, 8, 15, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasal et al. (US 2003/0009542) in view of Medina et al. (US 6,975,581), and further in view of Johansson et al. (US 6,873,624).

Consider **claim 7**, Kasal and Medina teach, television broadcast content receiving terminals (110, 115 – Fig.1) and allocates one of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server (Kasal – Paragraph 0032, 0039, 0070), but do not explicitly teach wherein said control section receives a channel switching request signal from one of said television broadcast content receiving terminals.

In analogous art, Johansson teaches a control section receives a channel switching request signal from one of content receiving terminals (Col 4: lines 6-10, 58-60 teaches a plurality of services such as external cable television network B11 – Fig.2, and internal television network F11 – Fig.2. Col 7: lines 20-32 teaches reconfiguration of VLAN allocation to a user based on the type of service specified to be used by the user. Although the example is between telephony and cable television network B11 services, the example is non-restrictive and can also include the case where the two services are both internal and external cable television network services).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Medina to include a control section receives a channel switching request signal from one of content receiving terminals, as taught by Johansson, for the advantage of notifying the switch of

the user's choice selections, allowing it to automatically readjust/reallocate desired services to the user device.

Consider **claim 15,** Kasal and Medina teach television broadcast content receiving terminals (110, 115 – Fig.1) and reads one of said virtual local area networks by referring to said menu of said television broadcast contents generated from said default server (Kasal – Paragraph 0032, 0039, 0070), determines whether said read one of said virtual local area networks is chargeable (Paragraph 0038; Paragraph 0032) or free, carries out an authentication when said read one of said virtual local area networks is chargeable (Paragraph 0050 teaches content that may be requested, accessed, and paid for by the viewer. Paragraph 0057 teaches virtual LANs that allow only authorized devices to receive media streams. *Therefore, authentication is performed in order for the selected content to be transmitted and received by the viewer*), and allocates said read one of said virtual local area networks when said read one of said virtual local area networks is free or when said authentication is permitted (Paragraph 0032 and 0057 teaches virtual LANs that allow only authorized devices to receive media streams), but do not explicitly teach wherein said control section receives a channel switching request signal from one of said television broadcast content receiving terminals.

In analogous art, Johansson teaches a control section receives a channel switching request signal from one of content receiving terminals (Col 4: lines 6-

10, 58-60 teaches a plurality of services such as external cable television network B11 – Fig.2, and internal television network F11 – Fig.2. Col 7: lines 20-32 teaches reconfiguration of VLAN allocation to a user based on the type of service specified to be used by the user. Although the example is between telephony and cable television network B11 services, the example is non-restrictive and can also include the case where the two services are both internal and external cable television network services).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Medina to include a control section receives a channel switching request signal from one of content receiving terminals, as taught by Johansson, for the advantage of notifying the switch of the user's choice selections, allowing it to automatically readjust/reallocate desired services to the user device.

Consider **claims 8 and 16**, Kasal, Medina, and Johansson teach, wherein said control section registers said allocated one of said virtual local area networks in said correspondence storing section by referring to the physical address of said one of said television broadcast content receiving terminals (Kasal - 110, 115 – Fig.1, and Paragraph 0031 teaches television broadcast receiving terminals. Medina - Col 4: lines 48-51; Col 1: lines 39-44 teaches communication between nodes in the same VLAN. Col 1: lines 61-64 teaches VLANs registered to a particular MAC address of a user device).

11. **Claims 9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasal et al. (US 2003/0009542) in view of Florin et al. (US 5,621,456).

Consider **claim 9,** Kasal teaches a default server (database server within the server farm 132 – Fig.1; Paragraph 0039, 0070), receives said television broadcast contents from said television broadcast content distributing servers to generate said menu of said television broadcast contents (Paragraph 0039 teaches receiving and storing indexed multimedia content to generate custom screens/menus containing available selections), but does not teach cyclically receiving said television broadcast contents and generating said menu by reducing images thereof.

In an analogous art, Florin teaches cyclically receiving television broadcast contents and generating a menu by reducing images thereof (Fig. 33; Col 20: lines 55-61).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include cyclically receiving television broadcast contents and generating a menu by reducing images thereof, as taught by Florin, for the advantage of presenting to the user a more friendly visual representation of selectable viewing content, allowing them to quickly scan the content for ones they desire to view, without consuming a considerable amount of system resources.

Conisder **claim 10,** Kasal teaches a default server (database server within the server farm 132 – Fig.1; Paragraph 0039, 0070), receives said television broadcast contents from said television broadcast content distributing servers to generate said menu of said television broadcast contents (Paragraph 0039 teaches receiving and storing indexed multimedia content to generate custom screens/menus containing available selections), but does not teach cyclically receiving said television broadcast contents and generating a menu, but does not explicitly teach time-divisionally receiving said television broadcast and generating said menu by time-divisionally generating said television broadcast contents.

In an analogous art, Florin teaches time-divisionally receiving television broadcast contents and generating a menu by time-divisionally generating said television broadcast contents (Fig. 33; Col 20: lines 55-61).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include time-divisionally receiving television broadcast contents and generating a menu by time-divisionally generating said television broadcast contents, as taught by Florin, for the advantage of presenting to the user a more friendly visual representation of selectable viewing content, allowing them to quickly scan the content for ones they desire to view, without consuming a considerable amount of system resources.

12. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kasal et al. (US 2003/0009542) in view of Johansson et al. (US 6,873,624).

Consider **claim 18,** Kasal does not explicitly teach wherein a fixed Internet protocol address is given to said system.

In an analogous art Johansson teaches, a fixed Internet protocol address is given to said system (Col 7: lines 37-42 and Col 8: lines 43-49 teaches fixed IP addresses given to VLANs of the system).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include a fixed Internet protocol address is given to said system, as taught by Johansson, for the advantage of providing respective services fixated to a known internet protocol address, allowing for better structuring and switching of services.

13. **Claims 19, 20, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasal et al. (US 2003/0009542) in view of Cheriton (US 2006/0155875), and further in view of Aksu et al. (US 2003/0061369).

Consider **claim 19,** Kasal teaches a television broadcast content distributing system (Fig.1) comprising:

a plurality of television broadcast content distributing servers for generating television broadcast contents (server farm 132 – Fig.1; Paragraph 0036-0037);

a plurality of television broadcast content receiving terminals for receiving said television broadcast contents (set top boxes 110 – Fig.1, television set 115 – Fig.1; Paragraph 0037);

a first channel allocating switches (core switch 124 – Fig.1), connected to said television broadcast content distributing servers, for allocating channels to said television broadcast content distributing servers (Paragraph 0032, 0035), respectively;

a plurality of groups of second channel allocating switches (Edge switches 122 – Fig.1), each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals (Fig.1; Paragraph 0032, 0037, 0042); and

a plurality of groups of virtual local area networks, each group arranged in correspondence with one of said channels between outputs of one of said first channel allocating switches and inputs of one group of said second channel allocating switches (Fig.1; Paragraph 0032).

Kasal does not explicitly teach a plurality of first channel allocating switches;

using multicast communication paths.

In an analogous art Cheriton teaches, a plurality of first channel allocating switches (212, 214, 216, 218 - Fig.2; Paragraph 0028);

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include a plurality of first channel allocating switches, as taught by Cheriton, for the advantage of alleviating computational load of switching server traffic and spreading load of switching traffic across multiple switches, allowing for more robust and reliable system.

Kasal and Cheriton do no explicitly teach using multicast communication paths.

In an analogous art Aksu teaches, using multicast communication paths (Paragraph 0025).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Cheriton to include using multicast communication paths, as taught by Aksu, for the advantage of servicing more viewers, while using similar amount of system resources.

Consider **claim 20,** Kasal teaches a television broadcast content distributing system (Fig.1) comprising:

a plurality of television broadcast content distributing servers for generating television broadcast contents (server farm 132 – Fig.1; Paragraph 0036-0037);

a default server for generating a menu of said television broadcast contents (database server within the server farm 132 – Fig.1; Paragraph 0039, 0070);

a plurality of television broadcast content receiving terminals for receiving said television broadcast contents and said menu of said television broadcast contents (set top boxes 110 – Fig.1, television set 115 – Fig.1; Paragraph 0037,0039, 0070);

a first channel allocating switches (core switch 124 – Fig.1), connected to said television broadcast content distributing servers and said default server, for allocating channels to said television broadcast content distributing servers and said default server (Paragraph 0032, 0035), respectively;

a plurality of groups of second channel allocating switches (Edge switches 122 – Fig.1), each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals (Fig.1; Paragraph 0032, 0037, 0042); and

a plurality of groups of virtual local area networks, each group arranged in correspondence with one of said channels between outputs of one of said first channel allocating switches and inputs of one groups of said second channel allocating switches (Fig.1; Paragraph 0032).

Kasal does not explicitly teach a plurality of first channel allocating switches;

using multicast communication paths.

In an analogous art Cheriton teaches, a plurality of first channel allocating switches (212, 214, 216, 218 - Fig.2; Paragraph 0028);

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include a plurality of first channel allocating switches, as taught by Cheriton, for the advantage of alleviating computational load of switching server traffic and spreading load of switching traffic across multiple switches, allowing for more robust and reliable system.

Kasal and Cheriton do no explicitly teach using multicast communication paths.

In an analogous art Aksu teaches, using multicast communication paths (Paragraph 0025).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Cheriton to include using multicast communication paths, as taught by Aksu, for the advantage of servicing more viewers, while using similar amount of system resources.

Consider **claim 21,** Kasal teaches a television broadcast content distributing system (Fig.1) comprising:

a plurality of television broadcast content distributing servers for generating television broadcast contents (server farm 132 – Fig.1; Paragraph 0036-0037);

a default server for generating a menu of said television broadcast contents (database server within the server farm 132 – Fig.1; Paragraph 0039, 0070);

an Internet protocol router (router 134 – Fig.1; Paragraph 0034);

a plurality of television broadcast content receiving terminals for receiving said television broadcast contents and said menu of said television broadcast contents (set top boxes 110 – Fig.1, television set 115 – Fig.1; Paragraph 0037, 0039, 0070); and communicating with the Internet (Paragraph 0034, 0067);

a first channel allocating switches (core switch 124 – Fig.1), connected to said television broadcast content distributing servers, said default server and said Internet protocol router, for allocating channels to said television broadcast content distributing servers, said default server and said Internet protocol router (Paragraph 0032, 0035), respectively;

a plurality of groups of second channel allocating switches (Edge switches 122 – Fig.1), each connected to one or more of said television broadcast content receiving terminals, said each of said second allocating channel switches allocating one or more of said channels to said one or more of said television broadcast content receiving terminals (Fig.1; Paragraph 0032, 0037, 0042); and

a plurality of groups of virtual local area networks, each groups arranged in correspondence with one of said channels between outputs of one of said first channel allocating switches and inputs of one group of said second channel allocating switches (Fig.1; Paragraph 0032).

Kasal does not explicitly teach a plurality of first channel allocating switches;

using multicast communication paths.

In an analogous art Cheriton teaches, a plurality of first channel allocating switches (212, 214, 216, 218 - Fig.2; Paragraph 0028);

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Kasal's system to include a plurality of first channel allocating switches, as taught by Cheriton, for the advantage of alleviating computational load of switching server traffic and spreading load of switching traffic across multiple switches, allowing for more robust and reliable system.

Kasal and Cheriton do no explicitly teach using multicast communication paths.

In an analogous art Aksu teaches, using multicast communication paths (Paragraph 0025).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Kasal and Cheriton to include using multicast communication paths, as taught by Aksu, for the advantage of servicing more viewers, while using similar amount of system resources.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Lin whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 9:00AM-6:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571)272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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09/28/2007

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